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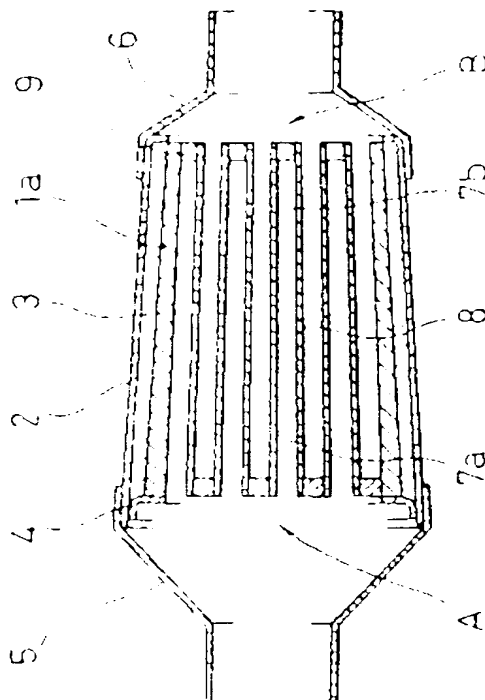
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TITLE : FINE PARTICLE TRAP FOR
COMBUSTION EXHAUST GAS



ABSTRACT : PURPOSE: To decrease a shearing force, exerted on a filter element by the back pressure of exhaust gas, by means of a case formed in a tapered shape and to prevent the occurrence of damage, by a method wherein a filter element made of ceramic used on a fine particle trap is formed in a tapered shape.

CONSTITUTION: A filter element 1a made of ceramic used in a fine particle trap is formed in a tapered shape, a portion having a large cross section is located, being pointed to the incoming side A of exhaust gas, and a portion having a small cross section is situated, being pointed to the outgoing side B thereof. The element is contained in a conical trapezoidal case 2 having a tapered shape conforming to the tapered shape of the element. In this case, a number of gas passages 7a and 7b are located to the interior of a filter element 1a and formed by a ceramic wall 8, and the opposite ends of the adjoining gas passages 7a and 7b are alternately blocked up with a blocking piece 9. This enables the back pressure of exhaust gas, produced by accumulated fine particles and exerted on the filter element 1a, to be converted into a radial compression force by means of stress produced by the case 2, and permits reduction of a shearing force exerted on the filter element 1.

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